

REMARKS

Applicant's counsel thanks Examiner Cooney for a very careful and thorough examination of the present application, and also for the very helpful and courteous personal interview conducted February 7, 2005. During the interview, both of the applied references (Lutter and Falke) were discussed. Applicant also proposed amendments to the claims as well as several new claims.

Claims 1, 2, 15 and 16 have been amended to specify 1) the foam is "semi-rigid" and 2) amine-based polyether polyol "having a propylene oxide extended tip," as more fully set forth below. The "70-130" index limitation has been canceled from claims 1 and 2 and moved to new dependent claim 27. Additional amendments also have been made to the claims for reasons unrelated to patentability, which are not in response to any rejection by the examiner, to more clearly set forth what is being claimed. New claims 28-32 also have been added to reflect additional novel aspects of the invention. No new matter has been added.

All of the independent claims stand rejected under 35 USC § 102(b) as being anticipated by both Lutter and Falke. Following the interview, independent claims 1, 2, 15 and 16¹ have been amended to specify that the foam is a "semi-rigid" foam, and also "amine-based polyether polyol having a propylene oxide extended tip." Basis for these amendments can be found, e.g., at ¶ 0017 ("propylene oxide extended tip") and throughout the specification ("semi-rigid"). As pointed out during the interview, neither Lutter nor Falke discloses a semi-rigid viscoelastic foam, or a method of making such foam, from a Part B composition having amine-based polyether polyol having a propylene oxide extended tip, as now recited in these

¹Claims 1 and 2 are product claims for embodiments of the foam, and claims 15 and 16 are for methods of making the foams.

claims. Accordingly, it is respectfully submitted that the rejections of these claims have been overcome.

During the interview, the Examiner suggested the applicant point out the meaning of "semi-rigid." As is generally known in the art, semi-rigid foams are a class of foams that exhibit properties of both conventional flexible and rigid foams, but which are sufficiently unique from each to be considered a separate class.

Flexible foams are viscoelastic foams that are characterized by a high degree of flexibility and a high rate of recovery following compression. That is, flexible foams generally spontaneously recover their initial shape as soon as the external force tending to deflect or compress the foam has been removed. Conversely, rigid foams are not viscoelastic -- they are essentially inflexible, rigid solids that cannot be compressed without damaging their cellular structure and will not recover following a forcible deflection. If a rigid foam is forcibly deflected, it will not recover from its deflected condition.

The "semi-rigid" foams disclosed in the application are viscoelastic in that they do recover following an impact-induced deflection. (Certain embodiments of the foams according to the invention recover substantially 100% following a deflection). However, the semi-rigid foams also exhibit significant rigidity, and embodiments of the semi-rigid foams disclosed in the application have a degree of rigidity similar or comparable to conventional 5 pcf expanded polystyrene. The semi-rigid foams according to the invention are viscoelastic foams which nonetheless have significant rigidity; they are slow to recover following a deflection compared to flexible foams, but they do recover, at least partially, which is a key factor distinguishing them from rigid foams.

In summary, semi-rigid foams according to the invention exhibit high rigidity,

comparable to or approaching that of a rigid foam, yet they can recover to a significant degree following a forcible deflection. This is a significant advantage over conventional rigid foams which cannot recover, but instead are irreversibly crushed following a forcible deflection. The specification also describes further attributes of semi-rigid foams.

It is submitted, respectfully, that the term “semi-rigid” is a term of art that is recognized by persons of ordinary skill in the art with respect to foams, and that the specification herein provides adequate description for such a person to appreciate the meaning of that term in the context of the present application.

With respect to new claims 28-32, basis for these claims can be found in the application as follows:

<u>Claim</u>	<u>Basis</u>
28	Table 1, ¶ 0029
29, 30	Throughout specification, e.g., ¶¶ 0021, 0043 and 0044
31	¶ 0041, Fig. 1
32	Table 1, ¶¶ 0019 and 0024

These new claims are directed to various novel combinations of compositions and physical properties which are neither disclosed nor suggested in any of the cited references. In particular, the following new claims are noted.

New claim 28 specifies the Part B composition has at least 40 parts by weight amine-based polyether polyol where the amounts of all polyether polyols in the Part B composition sum to 100 parts by weight. Neither Lutter nor Falke discloses such a proportion of amine-based polyether polyol, having a propylene oxide extended tip in the Part B composition, as now recited in claim 28 through dependence from claim 1.

New claim 31 specifies certain physical properties measured for a 5.5" x 5.5" x 1" thick sample of the foam recited in claim 1, which properties are neither disclosed nor suggested in any of the cited references. Nor is there any basis to consider these properties inherent or necessarily present based on any foam formulation fairly disclosed in any of those references.

Lastly, new claim 32 recites a particular polyol formulation for the Part B composition that is neither disclosed nor suggested in the cited references.

For the foregoing reasons, it is respectfully submitted that the rejections of independent claims 1, 2, 15 and 16 all have been overcome, and that these claims now are in condition for allowance. Also new claims 28 and 31-32 recite novel combinations which also are believed to be allowable at least for the reasons described above. All remaining claims are dependent claims and should be allowable at least by virtue of their dependence on an allowable base claim.

If the Examiner has any questions or concerns regarding the instant submission, or otherwise for any reason that may advance prosecution, he is invited to please contact the undersigned at the phone number provided below.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 36211.

Respectfully submitted,

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